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Sense of place and partnering with the National Park Service - Innovative ideas for teaching Earth Science

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The Michigan Teacher Excellence Program (MITEP) is a 5 -year research and professional development program working with middle-grade Earth Science teachers from selected urban districts in Michigan. This National Science Foundation funded project focuses upon improving Earth Science teaching and learning in Michigan urban public schools through intensive teacher training, leadership development, and student engagement. Core partners include academic institutes, Michigan public schools, and the National Park Service. Academic institutes provide the foundation upon which greater depth and enrichment of Earth Science content can be realized. K-12 educators are excellent communicators, and find innovative ways of integrating and applying newly acquired content in an appropriate fashion in their classrooms.

A component of this program entails identifying and developing ways of communicating the complex nature of Earth Science. For this purpose, partnerships with the National Park Service are particularly relevant. National Parks are ideal outdoor classrooms that engage learners, not only through an intellectual connection to Earth Science subject matter, but also through an emotional connection via culture, history, and sense of place.

MiTEP teacher participants are enlisted to work with Midwest National Park interpreters in summer 2011 on intensive, hands-on internships. These placements aspire to develop a deeper understanding of diverse learner needs in scientific, inquiry-based exploration of the natural environment. MiTEP works to match teachers' skill sets and interests with the needs of the parks. This paper presents methodologies and expectations associated with this innovative connection between middle school teachers and their surrounding environment. A component of place-based education already employed by National Park Service interpretive programs is the inclusion of traditional knowledge, and the blending of both physical and social sciences. An example of teaching Earth Science education using place and traditional knowledge is presented and discussed.

MiTEP is working to address the mounting problem of engaging urban students unable to access sites offering deeply seeded sense of place. It is envisioned that by working with National Park interpreters MiTEP teachers will enable students to develop a personal sense of place and connection to subject matter by bringing their park experiences back into the classroom. This knowledge will facilitate a more visceral experience of the outdoors for urban students who may not enjoy the opportunity of visiting these places themselves. It is our hypothesis that partnering with National Parks, Geoparks, and other institutes that offer a more interpretive approach to Earth Science education, will improve scientific literacy and environmental stewardship.